

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 17GE07039	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 01/47670	International filing date (day/month/year) 07/12/2001	(Earliest) Priority Date (day/month/year) 22/12/2000
Applicant GENERAL ELECTRIC COMPANY		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.7

as suggested by the applicant.



None of the figures.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/47670

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H02K3/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H02K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 644 179 A (STAUB FRED WOLF ET AL) 1 July 1997 (1997-07-01) cited in the application column 3, line 13 - line 30; figure 3 ---	1-16
X	PATENT ABSTRACTS OF JAPAN vol. 006, no. 155 (E-125), 17 August 1982 (1982-08-17) & JP 57 078350 A (HITACHI LTD), 17 May 1982 (1982-05-17) abstract ---	1-3,9-11
A	PATENT ABSTRACTS OF JAPAN vol. 006, no. 155 (E-125), 17 August 1982 (1982-08-17) & JP 57 078338 A (HITACHI LTD), 17 May 1982 (1982-05-17) abstract -----	1-16

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

20 August 2002

Date of mailing of the international search report

29/08/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Frapporti, M

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/47670

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5644179	A	01-07-1997	NONE	
JP 57078350	A	17-05-1982	NONE	
JP 57078338	A	17-05-1982	NONE	

Patent Abstracts of Japan

PUBLICATION NUMBER : 57078350
PUBLICATION DATE : 17-05-82

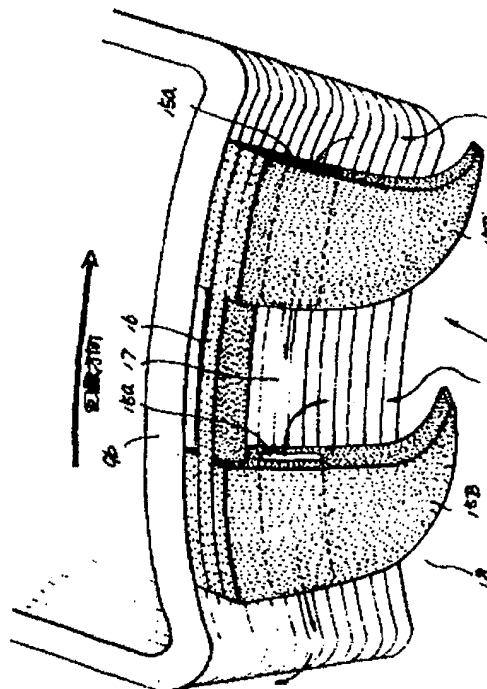
APPLICATION DATE : 31-10-80
APPLICATION NUMBER : 55152165

APPLICANT : HITACHI LTD;

INVENTOR : OI MASAO;

INT.CL. : H02K 9/04 H02K 3/24

TITLE : ROTOR IN ROTARY ELECTRIC MACHINE



ABSTRACT : PURPOSE: To improve cooling efficiency of coil end portions and reduce vibration and make the coil end portions compact, by a method wherein a cooling fan with inner diameter side projecting towards the rotating direction is provided within a draught gap between the coil end portions, and draught passage is constituted at outer diameter side of the cooling fan.

CONSTITUTION: Tip at inner diameter side of an insulation spacer 15B interposed between coil end portions 9b is curved towards the rotating direction of arrow indication, and a cooling fan is formed to blow cooling air between the coil ends accompanying the rotation. A draught hole 15a penetrating in the rotating direction is formed at outer diameter side of the insulation spacer 15B thereby passage for cooling air flowing between the coil ends is constituted. In this constitution, cooling efficiency of the coil end portion 9b is improved, vibration caused by thermal expansion is reduced, and the coil end portions are made compact.

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Patent Abstracts of Japan

PUBLICATION NUMBER : 57078338
PUBLICATION DATE : 17-05-82

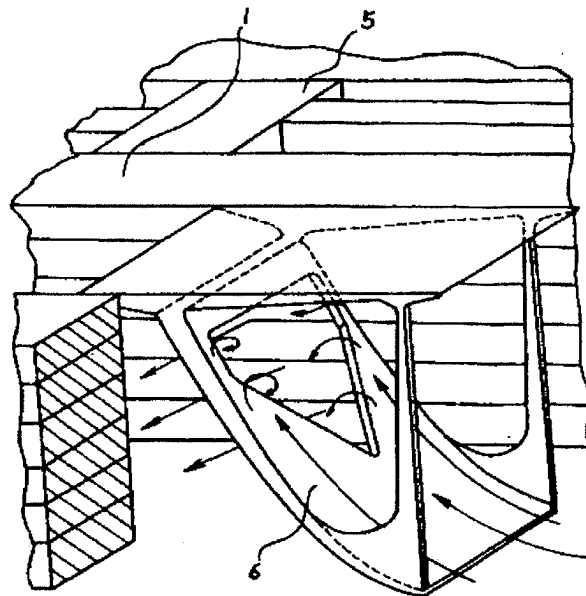
APPLICATION DATE : 04-11-80
APPLICATION NUMBER : 55153879

APPLICANT : HITACHI LTD;

INVENTOR : TOMIZAWA SHIGEO;

INT.CL. : H02K 3/24

TITLE : COOLING DEVICE OF ROTOR
ENDCOIL PART OF ROTARY
ELECTRIC MACHINE



ABSTRACT : PURPOSE: To remove the stagnation of refrigerant near a retaining ring by preparing a ventilation spacer having an inclined plane along the flow of refrigerant and a ventilation hole between the endcoils with an inserted intercoil spacer.

CONSTITUTION: Between the endcoils 1 with an inserted intercoil spacer 5 a ventilation spacer 6 having an inclined plane along the flow of the refrigerant when rotating as well as a ventilation hole thereon is to be inserted. Thereby the refrigerant is forced to flow thus to improve a refrigerating effect of the endcoil with an increased quantity of refrigerant.

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